

Given: 2 dice and one deck of cards (52 cards - Jokers excluded)

(FYI: a deck of cards has 4 suits, and 13 cards per suit)

Answers

1. What is the probability of drawing a diamond and rolling the sum of 5?

$$\left(\frac{13}{52}\right)\left(\frac{4}{36}\right) = \frac{52}{1872} = .027$$

2. What is the probability of drawing an Ace or a heart?

$$\frac{4}{52} + \frac{13}{52} - \frac{1}{52} = \frac{16}{52} = \frac{4}{13} = 31\%$$

3. What is the probability of rolling snake eyes and drawing an ace?

$$\left(\frac{1}{36}\right)\left(\frac{4}{52}\right) = \frac{4}{1872}$$

4. What is the probability of rolling the dice and getting a sum of at least 3?

$$\frac{35}{36} \quad \left[1 - \frac{1}{36}\right]$$

5. What is the probability of getting doubles when rolling the dice?

$$\frac{6}{36} = \frac{1}{6}$$

6. What is the probability of rolling an even number or a seven?

$$\frac{18}{36} + \frac{6}{36} = \frac{24}{36} \quad 66\frac{2}{3}\%$$

7. What is the probability of drawing a 7 from the deck and getting the sum of seven on the dice?

$$\left(\frac{4}{52}\right)\left(\frac{6}{36}\right) = \frac{24}{1872} =$$

8. What is the probability of drawing a King after drawing an Ace?

(an Ace has already been drawn)

$$.0128$$

9. What is the probability of drawing 2 Queens?

$$\left(\frac{4}{52}\right)\left(\frac{3}{51}\right) = \frac{12}{2652} = .0045$$

$$\frac{4}{52} \cdot \frac{4}{51} = \frac{16}{2652}$$

$$.006$$